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**PRELIMINARY ASSESSMENT/  
VISUAL SITE INSPECTION**

**MANNER PLATING, INC.  
LOVES PARK, ILLINOIS**

**ILD 082 050 576**

**FINAL REPORT**

**Prepared for**

**U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Waste Programs Enforcement  
Washington, DC 20460**

Work Assignment No.	:	C05087
EPA Region	:	5
Site No.	:	ILD 082 050 576
Date Prepared	:	November 19, 1991
Contract No.	:	68-W9-0006
PRC No.	:	009-C05087-IL15
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EPA Region 5 Records Ctr.



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### LIST OF ATTACHMENTS

#### Attachment

- A - EPA PRELIMINARY ASSESSMENT FORM 2070-12
- B - VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS
- C - VISUAL SITE INSPECTION FIELD NOTES

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## EXECUTIVE SUMMARY

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Resource Applications, Inc. (RAI), performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Manner Plating, Inc. (Manner) facility in Loves Park, Illinois. This report summarizes the results of the PA/VSI and evaluates the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified. In addition, a completed U.S. Environmental Protection Agency (EPA) Preliminary Assessment Form (EPA Form 2070-12) is included in Attachment A to assist in prioritization of RCRA facilities.

Manner manufactures various forms of zinc plated fasteners. The 7,000-square foot facility employs 9 people and has been in operation since 1974. Manner is classified as a generator with primary wastes consisting of plating cake (D007) and wastewater. The plating cake is managed in the Hazardous Waste Storage Area/Wastewater Treatment Unit (SWMU 2) and is stored for less than 90 days.

The PA/VSI identified the following 3 SWMUs and no AOCs at the facility:

### Solid Waste Management Units

1. Closed Hazardous Waste Storage Area
2. Hazardous Waste Storage Area/Wastewater Treatment Unit
3. Hazardous Waste Drainage System

The potential for release of hazardous constituents to ground water, surface water, air, or soil is low because any release of material would be contained inside the building. However, there is a moderate potential for release of spent hydrochloric acid to the sanitary sewer system. The acid drains from an overflow pipe located at the top of the hydrochloric acid tank and flows over the floor to the Hazardous Waste Drainage System (SWMU 3). A sanitary drain is located inside the trench, but its overflow can easily enter the sanitary sewer drain. A release from the Wastewater Treatment Unit would be contained in the 2,500-gallon overflow tank. The waste (plating cake) stored in the Hazardous Waste Storage Area is solid and immobile so the release potential to the above mentioned environmental media is low.

Manner is located at 926 E. River Lane, a residential/industrial area of Loves Park, Illinois. Loves Park is a town of 15,000 people northeast of Rockford. A chain link fence surrounds the accessible areas of the facility and company employees are on site 24 hours per day, 6 days per week.

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Loves Park receives its water supply from sandstone aquifers located at a depth of 134 feet and extending to a depth of 196 feet. The nearest municipal well is located 300 feet southwest of the facility and ground water flows in a east to west direction. Other than the Rock River located 1.2 miles west of the facility, there are no other sensitive environments within 2 miles of the facility.

A release of 5 gallons of nickel plating solution occurred in 1976 inside the facility. The release was contained inside the building and the material was cleaned up.

RAI recommends no further corrective action at this time. However, Manner should provide data substantiating the classification of waste caustic ash as non-hazardous.

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## 1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC), received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5. Resource Applications, Inc. (RAI), TES 9 member, provided the necessary assistance to complete the PA/VSI activities for Manner Plating, Inc. (Manner).

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a nonroutine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility.
- Obtain information on the operational history of the facility.
- Obtain information on releases from any units at the facility.
- Identify data gaps and other informational needs to be filled during the VSI.

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA.
- Identify releases not discovered during the PA.
- Provide a specific description of the environmental setting.
- Provide information on release pathways and the potential for releases to each medium.
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases.

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all SWMUs, identifying evidence of releases, initially identifying potential sampling locations, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Manner facility in Loves Park, Illinois. The PA was completed on June 22, 1991. RAI gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. RAI also reviewed publications of the U.S. Department of Agriculture (USDA), U.S. Geological Survey (USGS), Federal Emergency Management Agency (FEMA), and the Illinois State Geological Survey (ISGS). The VSI was conducted on June 24, 1991. It included interviews with Manner facility representatives and a walk-through inspection of the facility. Three SWMUs and no AOCs were identified at the facility.

RAI completed EPA Form 2070-12 using information gathered during the PA/VSI. This form is included in Attachment A. The VSI is summarized and 10 inspection photographs are included in Attachment B. Field notes from the VSI are included in Attachment C.



## **2.0 FACILITY DESCRIPTION**

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, release history, regulatory history, environmental setting, and receptors.

### **2.1 FACILITY LOCATION**

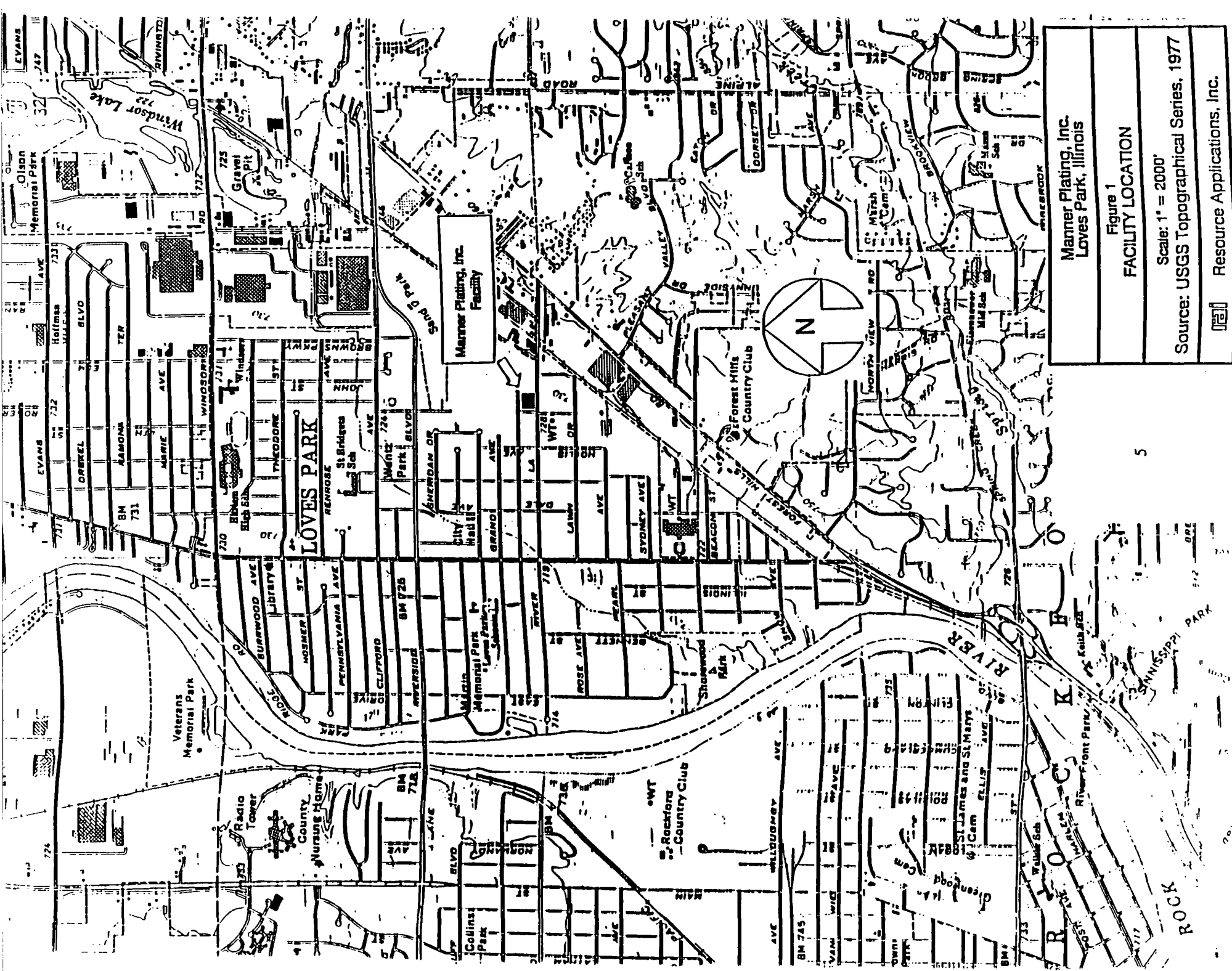
Manner is a 7,000-square foot facility located at 926 E. River Lane, Loves Park, Illinois (Figure 1). The facility is situated in a residential/industrial area of Loves Park, a community of 15,000 people northeast of Rockford at latitude 42° 16' 10"N longitude 89° 02' 45"W.

### **2.2 FACILITY OPERATIONS**

Prior to Manner beginning operations in 1974, the facility was a rug cleaning operation. Currently, Manner employs 9 people.

Manner manufactures zinc plated fasteners. The facility currently operates 2 separate lines, a Passivating Line and an Automatic Zinc Plating System. Prior to plating, the fasteners are cleaned in a series of tanks that contain caustic and acid solutions. Once the impurities are removed, the fasteners are plated. In some instances, the zinc plated fasteners are dipped in tank containing clear chromate to brighten the product.

Before the construction of the Wastewater Treatment Unit (SWMU 2) in 1983, the wastes from the plating and passivating operations were managed in a similar, but smaller treatment unit located in the same place as the current unit. The sludge was filtered out by gravity dewatering bags, placed in drums at the Closed Hazardous Waste Storage Area (SWMU 1) and shipped off-site for disposal, while the water was pumped into the wastewater treatment unit, treated and disposed of in the sewer system. Since 1983, the waste has been filtered through a press, dried, and stored in plastic bags, prior to disposal. Facility SWMUs are listed in Table 1 and shown in Figure 2.



Manner Plating, Inc.  
Loves Park, Illinois

Figure 1  
FACILITY LOCATION

Scale: 1" = 2000'

Source: USGS Topographical Series, 1977

Resource Applications, Inc.

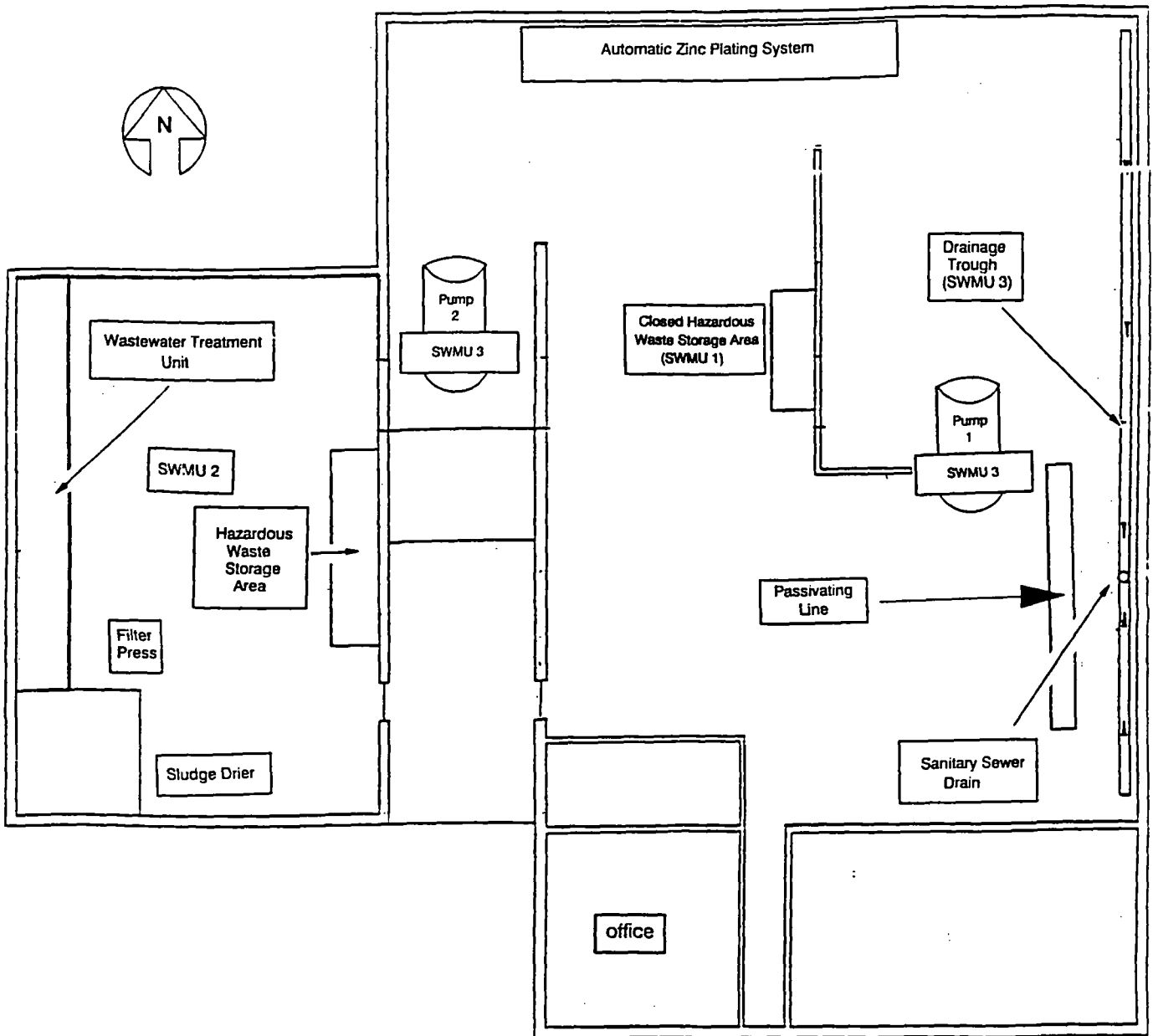
**TABLE 1**  
**SOLID WASTE MANAGEMENT UNITS (SWMUs)**


<b>SWMU Number</b>	<b>SWMU Name</b>	<b>RCRA Hazardous Waste Management Unit*</b>	<b>Status</b>
1	Closed Hazardous Waste Storage Area	Yes	Closed in 1988
2	Hazardous Waste Storage Area/Wastewater Treatment Unit	No	Active, less than 90 day storage
3	Hazardous Waste Drainage System	No	Active

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\* A RCRA hazardous waste management unit is one that currently requires or formerly required a RCRA Part A or Part B Permit.

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Manner Plating, Inc. Loves Park, Illinois
Figure 2 FACILITY LAYOUT/SWMU LOCATIONS
Scale: 1" = 15' Source: Manner Plating, Inc., 1991
 Resource Applications, Inc.

## 2.3

### WASTE GENERATING PROCESSES

Wastes generated at the Manner facility (Table 2) originate from the Passivating Line and the Automatic Zinc Plating System. The spent hydrochloric acid and, on occasion, spent nitric acid from the Passivating Line drain out of an overflow pipe located at the top of the tanks and flow over a concrete floor into the Hazardous Waste Drainage System (SWMU 3). The Drainage Trough associated with this system is located east of the Passivating Line. The wastes flow north through the trough to Pump 1, (SWMU 3) which transfers the waste to the Wastewater Treatment Unit (SWMU 2). A concrete partition located in the trough is used as a barrier to prevent the spent acid from entering a sanitary sewer drain, also located in the trough. The sodium hydroxide tanks in the Passivating Line have similar drainage systems as the acids tanks. However, the wastes flow to the drain and are discharged into the sewer system. On one occasion, Manner cleaned out their caustic tanks that are used to clean metal fasteners, generating a caustic ash waste. Since January, 1991 the facility began accumulating the caustic ash waste in drums at the Hazardous Waste Storage Area (SWMU 2) and has yet to manifest it off-site. Facility representatives verbally stated that the caustic ash waste is nonhazardous. Zinc plating wastes, chromate bright dip wastes, and spent acids generated from the Automatic Zinc Plating System drain from their respective tanks, through a piping system to Pump 2 (SWMU 3) and are transferred to the Wastewater Treatment Unit (SWMU 2). The spent caustics from the plating operation drain from their tanks, through the piping system, and into the drain located east of the Passivating Line. After treatment in the Wastewater Treatment Unit, the chromate and zinc sludge are filtered through a press. The plating cake (D007) generated from the press is then placed in a Sludge Drier. Once dried, the plating cake is stored in plastic bags at the Hazardous Waste Storage Area and removed at a rate of 2 cubic yards per month by Envirite, Inc. Harvey, Illinois. The wastewater generated from the treatment unit is pumped to the drain located east of the Passivating Line and discharged to the sewer system. The city of Loves Park Water Department has not reported any discharges of hazardous materials from the Manner facility and considers wastewater effluent discharged from the facility to be nonhazardous.

## 2.4

### RELEASE HISTORY

In 1976, a small release (5 gallons) of nickel plating solution occurred inside the northeastern corner of the building. According to John Gruner, the release was contained inside the building and the material was cleaned up (Manner, 1991). Mr. Gruner could not recall how the material was removed from the facility.

**TABLE 2**  
**SOLID WASTES**

<u>Waste/EPA Waste Code</u>	<u>Source</u>	<u>Primary Management Unit</u>
Plating Cake/D007	Filter Press	SWMU 2
Wastewater	Production Process	SWMU 2
Caustic Ash	Production Process	SWMU 2
Hydrochloric Acid	Production Process	SWMUs 2 & 3
Nitric Acid	Production Process	SWMUs 2 & 3
Chromate/D007	Production Process	SWMUs 2 & 3
Zinc	Production Process	SWMUs 2 & 3

There have been no other documented releases at the facility.

## 2.5

### REGULATORY HISTORY

Manner filed a Notification of Hazardous Waste Activity designating the company as a generator and treatment, storage, and disposal (TSD) facility on August 19, 1980 (Manner, 1980a). On November 17, 1980, the facility filed a Part A Permit to annually treat 33,000 kilograms (kg) of F006, 2,000 kg of F008, and 60 kg of F009 waste (Manner, 1980b). Manner misidentified their process codes on the Part A Permit application as T01. On January 17, 1986, Manner resubmitted their Part A Permit identifying the same waste type and quantity; however, the process code was changed to S01 (Manner, 1986). According to Mr. Gruner, the F006, F008, and F009 waste codes were mis-identified on the Part A Permit and should have been identified as D007. The facility submitted a Closure Plan for the S01 area on March 18, 1986. On January 22, 1988, IEPA determined that the closure met the requirements of 35 Illinois Administrative (35 Ill. Adm.) Code, Section 725 and 40 CFR, Part 265. Manner is now classified as a generator only (IEPA, 1988).

Manner has a General Wastewater Discharge Permit from the Sanitary District of Rockford (SDR) to discharge wastewater (SDR, 1988). The facility does not discharge waste into the air or surface water; therefore, Manner does not have air or NPDES permits.

A June 4, 1982 IEPA inspection revealed the following violations of 35 Ill. Adm. Code. Manner failed to: 1) provide a written waste analysis plan; 2) provide documentation that routine facility inspections are conducted; 3) provide personnel training records; 4) provide a contingency plan; 5) provide hazardous waste operating records; and 6) provide a facility closure plan (IEPA, 1982). A November 17, 1982 letter from John Gruner, Manner to Robert Wengrow, IEPA, stated that the violations had been corrected (Manner, 1982). However, IEPA documentation confirming the resolution of the violations was not available.

A March 25, 1985 IEPA inspection revealed the following violations of 35 Ill. Adm. Code. Manner failed to: 1) provide manifest document number; 2) provide a waste analysis plan; 3) provide facility inspection schedule; 4) provide facility personnel training records; 5) provide an adequate contingency plan; and 6) close hazardous waste storage containers (IEPA, 1985a).

During the Pre-Enforcement Conference concerning these violations, it was determined that Manner's Closure Plan was inadequate (IEPA, 1985b). All violations discovered during the March 25,

1985 inspection, except violations 2 and 3 stated above, were resolved by August 8, 1985. Violations 2 and 3 were scheduled to be resolved by September 3, 1985. The closure violations were resolved on November 12, 1985 (IEPA, 1985c).

A September 17, 1986, IEPA inspection revealed the following violations in 35 Ill. Adm. Code. Hazardous waste containers were not clearly labeled "Hazardous Waste" and accumulations dates were not clearly marked. No mention was made about outstanding violations noted in the March 25, 1985 inspection. The violations from the September 17 inspection were resolved on December 19, 1986 (IEPA, 1986).

## **2.6 ENVIRONMENTAL SETTING**

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the Manner Plating facility.

### **2.6.1 Climate**

The site is situated in Loves Park, a suburb located northeast of Rockford in Winnebago County, Illinois. Rockford is a national weather service office. With no significant topographical barriers to airmass flow, the climate in the area is typically continental with cold winters, warm summers and frequent short period fluctuations in the temperature, humidity, cloudiness and wind direction (Ruffner, 1985). The average daily temperature is 47.8°F. The lowest average daily minimum temperature is 9.8°F in January. The highest average daily maximum temperature is 91.9°F in August. The prevailing wind direction is west-southwest and the average wind speed is 9.9 miles per hour. Average annual net precipitation 5.44 inches. In winter about one half of the precipitation (10 percent of the annual total) falls as snow. During the fall, winter, and spring, the pattern of precipitation tends to be more uniform over both time and distance, whereas in summer rainfall is often locally heavy and variable. The 1-year, 24-hour maximum rainfall recorded in the area over the last 25 years is 5.56 inches (Ruffner and Bair, 1985).

### **2.6.2 Flood Plain and Surface Water**

The facility is located about 0.5 mile east of Interstate Route 51. General direction of surface flow is in a west - southwesterly direction. In the vicinity of the site, the terrain slopes about 15 feet over a 1-mile distance, providing effective relief for surface run-off. The facility is in a Zone C flood



plain, that is an area of minimal flooding outside the 500-year flood plain (FEMA, 1982). The Rock River is the closest surface water and is located 1.2 miles west of the facility.

### **2.6.3 Geology and Soils**

Winnebago County is characterized by broad, rolling glaciated uplands that rise 100 to 200 feet above the valleys. The bedrock along the Rock River in the Rockford area lies buried beneath glacial deposits that are up to 300 feet thick (Anderson, 1967). These glacial deposits consist of sorted sand and gravel, with some finer material, and are known as valley train deposits (Berg, et al., 1984; Hackett and Bergstrom, 1956). The facility is surrounded by buildings, parking lots and pavement which prevent complete identification of the geological features. The area's drainage characteristics are well graded so that surface water drains to edges of lots and finally into the storm water drainage system. As a result of construction, the water carrying capacity and permeability of the soil vary and are generally considered low to moderate. Runoff is considered moderate to high because of the steep slopes and the proximity of the Rock River.

The sand and gravel deposits in the Rock River Valley near the site are approximately 150 feet thick. The bedrock units underlying the glacial drift are marine sandstones, shales and dolomites, with an approximate total thickness of 2,000 feet. These rocks were deposited in the interval 520 to 400 million years ago, during the Cambrian, Ordovician and Silurian periods of the Paleozoic Era. The uppermost bedrock units in the vicinity of the site are dolomites of the Galena-Platteville Formation, and these are underlain by the Glenwood-St. Peter sandstones.

### **2.6.4 Ground Water**

In northern Illinois ground water resources are available from four major aquifers, including: (1) sand and gravel aquifers in the glacial drift; (2) the dolomite aquifers, consisting of the Galena and Platteville Dolomite groups; (3) sandstone aquifers consisting of the Glenwood-St. Peter and Ironton-Galesville Sandstones; and, (4) the deeper Mt. Simon aquifers, consisting of the Mt. Simon Sandstones of the Eau Claire Formation (Berg, et al., 1984). In the site vicinity, excellent sand and gravel aquifers occur. Municipal and industrial supplies are obtained from up to 150 feet of coarse sand and gravel (Hackett and Bergstrom, 1956).

The Galena-Platteville Dolomite group constitutes the uppermost bedrock in Winnebago County, and is probably the most widely used bedrock aquifer for domestic supplies, although the deeper

sandstones are the most dependable source for large quantities of ground water. Because of their widespread distribution, consistent water yielding zones and shallow position, the dolomites provide water to most of the wells through joints and fractures close to the land surface. The average thickness of drift over the dolomite is 30 feet and the average depth of wells is 104 feet. Reported well yields range from 5 to 40 gallons per minute (gpm) with an average yield of 20 gpm. Penetration into dolomite from about 20 to 100 feet yields satisfactory water supplies. Where the drift cover is relatively thin, dolomite aquifers are very sensitive to contamination because water moves through the joints and fractures and there is little opportunity for filtration through granular materials (Berg, et al., 1984). In close proximity to the Rock River, the drift deposits are underlain directly by the St. Peter sandstones, due to removal of the dolomites by erosion.

The St. Peter, Ironton-Galesville and the Elmhurst-Mt. Simon Sandstones furnish large quantities of water. Deeper aquifers are used only for larger municipal and industrial water supplies. The St. Peter Sandstone, the shallowest of the three aquifers, is used for domestic ground water supplies and is present at a depth of approximately 150 feet below the land surface near the site (Berg, et al., 1984). The general flow of ground water is from east to west towards the Rock River.

## **2.7 RECEPTORS**

Manner is located in a residential/industrial area of Loves Park, Illinois. Loves Park is a suburb of Rockford and has a population of 15,000. A chain link fence surrounds the back and sides of the facility and Manner employees are on-site 24 hours per day, 6 days per week, thus preventing accidental public exposure.

The terrain in the vicinity of the site slopes towards the Rock River located 1.2 miles west of the facility. Manner and Loves Park receive their water supply from ground water wells, the nearest of which is 300 feet southwest of the facility. According to George Brettrager, of the Loves Park Water Department (LPWD), the well is located at a depth of 134 feet and extends to a depth of 196 feet, into the St. Peter sandstone (LPWD, 1991). Other than the Rock River, no other sensitive environments were located within 2 miles of the facility.

### 3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 3 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of release, and RAI observations.

#### SWMU 1

#### Closed Hazardous Waste Storage Area

**Unit Description:**

This 30 foot by 5 foot former storage area was used to store hazardous waste sludge in 55-gallon drums from 1974 to 1984. However, the unit did not undergo formal RCRA closure until 1988. It is located in the central portion of the facility, south of the Automatic Zinc Plating System (see photo 3).

**Date of Startup:**

1974

**Date of Closure:**

January 22, 1988.

**Wastes Managed:**

Plating cake (D007).

**Release Controls:**

The unit is located inside with no secondary containment. The wastes were stored in drums that were placed on concrete flooring.

**History of Release:**

No releases were documented at this unit.

**Observations:**

The area is currently used to store finished product. No visual evidence of a release was observed.

#### SWMU 2

#### Hazardous Waste Storage Area/Wastewater Treatment Unit

**Unit Description:**

These units are located in a 1,980-square foot (sq. ft.) area in the western portions of the facility. It consists of a Wastewater Treatment Unit, a Filter Press, a Sludge Drier, and a Hazardous less than 90-day Drum Waste Storage Area. The Wastewater Treatment Unit comprises a 300-gallon reduction tank, 800-gallon pH adjustment tank, 1,000-gallon

clarifying tank, a 2,500-gallon clarifier over-flow tank, a 1,500-gallon settling tank, a sand filtration system, and a filter press. Once the plating cake is filtered out, the wastewater enters the sanitary sewer system. The plating cake generated from the Filter Press is de-watered in the Sludge Drier. The plating cake is transported through the drier on a conveyor belt and the dried plating cake is deposited in a 55-gallon drum. Once the drum is full, the plating cake is transferred into plastic bags and stored at the Hazardous Waste Storage Area. The Hazardous Waste Storage Area is a 20-foot by 5-foot open area located 10 feet northeast from the Sludge Drier (see photos 7-10).

Date of Startup:	1983
Date of Closure:	This unit is currently active.
Wastes Managed:	Non-hazardous caustic ash, spent hydrochloric acid, spent nitric acid, zinc, chromate (D007).
Release Controls:	All of these units are on sound 8-inch thick concrete flooring. The Wastewater Treatment Unit has a 2,500-gallon clarifying overflow tank that is used as secondary containment in the event of a release from the other tanks.
History of Release:	No releases were documented at this unit.
Observations:	At the time of the VSI, RAI observed a 55-gallon drum 1/2 full of plating cake, an 8-foot by 4-foot sheet of plywood with plating cake placed upon it awaiting transfer to the Sludge Drier, and 13 55-gallon plastic drums containing waste from the caustic tanks. The waste from the caustic ash (non-hazardous) tanks has been at the facility since January 1991. The facility should provide documentation substantiating the classification of the caustic ash as non-hazardous.

**SWMU 3****Hazardous Waste Draining System****Unit Description:**

This unit consists of a Piping System, a Drainage Trough, and 2 Pumps. The Drainage Trough, located east of the Passivating Line is 4 inches deep and 8 inches wide. The concrete trough is used to transfer waste generated from the Passivating Line to Pump 1 where it is then transferred to SWMU 2. The continuous flow of wastes through the trough prevent sludge build up. The Automatic Zinc Plating System has a Piping System that transports the waste acids and plating solutions to Pump 2, where the wastes are then transferred to SWMU 2 (see photos 2, 4, & 6).

**Date of Startup:**

The Passivating Line started producing in 1974 while the Automatic Zinc Plating System began operations in 1985.

**Date of Closure:**

This unit is currently active.

**Wastes Managed:**

Spent hydrochloric acid, spent nitric acid, zinc, and chromate (D007).

**Release Controls:**

There is no method to control the direction of flow from the waste stream leaving the Passivating Line. The wastes could enter the sanitary sewer drain located in the trough. A concrete barrier does prevent waste already in the trough from entering the sewer system. There is no monitoring system; however, there have been no documented violations under the General Wastewater Discharge Permit issued to Manner by the Sanitary District of Rockford. The Piping System for the Automatic Zinc Plating Line is dedicated to each respective tank.

**History of Release:**

No releases have been documented at this unit.

**Observations:**

The waste from the zinc plating system was observed flowing over the floor to the trough. There is no provision to prevent the waste from entering the adjacent sanitary sewer drain. The Piping System associated with the Automatic Zinc Plating System visually appeared to be in sound condition.

#### 4.0 AREAS OF CONCERN

No AOCs were observed at the facility.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSII identified 3 SWMUs and no AOCs at the Manner facility. Background information on the facility's location, operations, waste generating processes, release history, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information, such as the unit's description, dates of operation, wastes managed, release controls, release history, and observed condition, is discussed in Section 3.0. AOCs are discussed in Section 4.0. Following are RAI's conclusions and recommendations for each SWMU. Table 3 identifies the SWMUs at the Manner facility and suggested further actions.

### **SWMU 1**

#### **Closed Hazardous Waste Storage Area**

#### **Conclusions:**

This area has not been used since 1984. When it was in use, the plating cake managed by the unit was located inside over a sound concrete floor. Therefore past potential release to the ground water, surface water, air, or soil was low. The unit is no longer operating, so current release potential to the above mentioned environmental is also low.

#### **Recommendations:**

No further action at this time.

### **SWMU 2**

#### **Hazardous Waste Storage Area/Wastewater Treatment Unit**

#### **Conclusions:**

The 2,500-gallon clarifying overflow tank would contain an accidental release from the Wastewater Treatment Unit. The waste plating cake and caustic ash are stored inside the building on flooring that appears visually sound. Therefore, potential release to ground water, surface water, air, or soil is low.

#### **Recommendations:**

No further corrective action is recommended at this time. However, the facility should provide documentation substantiating classifying waste caustic ash as non-hazardous.

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TABLE 3  
SWMU SUMMARY

<u>SWMU</u>	<u>Operational Dates</u>	<u>Evidence of Release</u>	<u>Suggested Further Action</u>
1. Closed Hazardous Waste Storage Area	1974 to 1988	None	No further action at this time.
2. Hazardous Waste Storage Area/ Wastewater Treatment Unit	1983 to Present	None	No corrective action; determine if caustic ash is hazardous.
3. Hazardous Waste Drainage System	1974 to Present	None	No further action at this time.

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SWMU 3

**Hazardous Waste Draining System**

**Conclusions:**

The waste from the Passivating Line could enter the sanitary sewer drain located in the trough. However, once inside the trough, there is a concrete barrier to prevent spent acids from entering the drain. There is no method to control the waste flow over the floor. Since these units are located inside and the flooring is sound, potential release to ground water, surface water, air, or soil is low.

**Recommendations:**

No further action at this time.

## REFERENCES

- Anderson, R. C., 1967. "Sand and Gravel Resources Along the Rock River in Illinois", Illinois State Geological Survey Circular 414, Urbana, Illinois.
- Berg, R. C., J. P. Kempton, and A. N. Stecyk, 1984. "Geology for Planning in Boone and Winnebago Counties", Illinois State Geological Survey Circular 531, Urbana, Illinois.
- Federal Emergency Management Agency (FEMA), 1982. National Flood Insurance Program, City of Rockford, Illinois, Winnebago County. Community-Panel Number 170723 0019 B. June 18.
- Hackett, J. E., and R. E. Bergstrom, 1956. "Groundwater in Northwestern Illinois", Illinois State Geological Survey Circular 207, Urbana, Illinois.
- Illinois Environmental Protection Agency (IEPA) 1982. Correspondence to John Gruner, Manner, from Robert Wengrow, IEPA, August 23.
- IEPA, 1985a. Correspondence to John Gruner, Manner, from Mark Haney, IEPA, April 19.
- IEPA, 1985b. Correspondence to John Gruner, Manner, from Michael Nechvatal, IEPA, June 3.
- IEPA, 1985c. Correspondence to John Gruner, Manner, from Mark Haney, IEPA, November 12.
- IEPA, 1986. Correspondence to John Gruner, Manner, from Harry Chappel, IEPA, December 19.
- IEPA, 1988. Correspondence to John Gruner, Manner, from Larry Eastep, IEPA, January 22.
- Loves Park Water Department (LPWD), 1991. Conversation between George Brettrager, Loves Park Water Department and Michael Gorman, RAI, August 26.
- Manner Plating, Inc. (Manner), 1980a. Notification of Hazardous Waste Activity, August 19.
- Manner, 1980b. Part A Permit application, November 17.
- Manner, 1982. Correspondence to Robert Wengrow, IEPA, from John Gruner, Manner, November 17.
- Manner, 1986. Part A Permit re-submittal, January 17.
- Manner, 1991. Conversation between Mike Gorman, RAI and John Gruner, Manner, July 24.
- Ruffner, A., 1985. Climates of the States, Vol. 1, Gale Research Co., Detroit, Michigan.
- Ruffner, A. and E. Bair, 1985. Weather of U.S. Cities, Vol. 1, Gale Research Co., Detroit, Michigan.
- Sanitary District of Rockford, 1988. General Wastewater Discharge Permit, March 28.
- U.S. Geological Survey, 1977. Rockford North Quadrangle, 7.5 minute topographic series.

**ATTACHMENT A**

**EPA PRELIMINARY ASSESSMENT FORM 2070-12**



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE IL 02 SITE NUMBER ILD 082 050 576

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)  
Manner Plating, Inc.

02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER  
926 River Lane

03 CITY  
Loves Park

04 STATE  
IL

05 ZIP CODE  
61111

06 COUNTY  
Winnebago

07 COUNTY CODE

08 CONG DIST

09 COORDINATES: LATITUDE

LONGITUDE

42 16 10.N

89 02 45.W

10 DIRECTIONS TO SITE (Starting from nearest public road)  
Route 251 north to Loves Park, east on River Lane to facility.

III. RESPONSIBLE PARTIES

01 OWNER (if known)  
Manner Plating, Inc.

02 STREET (Business, mailing, residential)  
926 River Lane

03 CITY  
Loves Park

04 STATE  
IL

05 ZIP CODE  
61111

06 TELEPHONE NUMBER  
(815) 877-7791

07 OPERATOR (if known and different from owner)

08 STREET (Business, mailing, residential)

09 CITY

10 STATE

11 ZIP CODE

12 TELEPHONE NUMBER

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE

☐ B. FEDERAL:

(Agency name)

☐ C. STATE

☐ D. COUNTY

☐ E. MUNICIPAL

☐ F. OTHER

(Specify)

☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☒ A. RCRA 3010 DATE RECEIVED: 08 / 19 / 80

MONTH DAY YEAR

☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / /

MONTH DAY YEAR

☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

BY (Check all that apply)

☒ YES DATE 07 / 24 / 91

☐ NO

☐ A. EPA

☒ B. EPA CONTRACTOR

☐ C. STATE

☐ D. OTHER CONTRACTOR

☐ E. LOCAL HEALTH OFFICIAL

☐ F. OTHER:

(Specify)

CONTRACTOR NAME(S): Resource Applications, Inc.

02 SITE STATUS (Check one)

☒ A. ACTIVE

☐ B. INACTIVE

☐ C. UNKNOWN

03 YEARS OF OPERATION

1974

Present

BEGINNING YEAR

ENDING YEAR

☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

Muriatic acid, nitric acid, chromate, sodium hydroxide, and zinc.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

The facility is located in a residential/industrial area of Loves Park. Any release from SWMUs would be contained within the facility.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste information and Part 3 - Description of Hazardous Conditions and Incidents.)

☒ A. HIGH

☐ B. MEDIUM

☐ C. LOW

☐ D. NONE

(Inspection required promptly)

(Inspection required)

(Inspect on time-available basis)

(No further action needed; complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT

Kevin Pierard

02 OF (Agency/Organization)  
U.S. EPA

03 TELEPHONE NUMBER  
(312) 886-4448

04 PERSON RESPONSIBLE FOR ASSESSMENT

Michael W. Gorman

05 AGENCY

06 ORGANIZATION

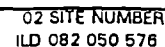
Resource Applications, Inc.

07 TELEPHONE NUMBER

(312) 332-2230

08 DATE

08 / 30 / 91  
MONTH DAY YEAR



☐ A. TOXIC  
☒ B. CORROSIVE  
☐ C. RADIOACTIVE  
☐ D. PERSISTENT  
☐ E. SOLUBLE  
☐ F. INFECTIOUS  
☐ G. FLAMMABLE  
☐ H. IGNITABLE  
☐ I. HIGHLY VOLATILE  
☐ J. EXPLOSIVE  
☐ K. REACTIVE  
☐ L. INCOMPATIBLE  
☐ M. NOT APPLICABLE



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND  
INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
IL	ILD 082 050 576

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 <input type="checkbox"/> A. GROUNDWATER CONTAMINATION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input checked="" type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
Low potential for release to ground water. All operations are located inside a building.			

01 <input type="checkbox"/> B. SURFACE WATER CONTAMINATION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input checked="" type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
Low potential for release to surface water. All operations are located inside a building.			

01 <input type="checkbox"/> C. CONTAMINATION OF AIR	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input checked="" type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
Low potential for release to air. All operations are located inside the building.			

01 <input type="checkbox"/> D. FIRE/EXPLOSIVE CONDITIONS	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input type="checkbox"/> POTENTIAL	<input checked="" type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
None identified, the facility does not use flammable material.			

01 <input type="checkbox"/> E. DIRECT CONTACT	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input checked="" type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
Low potential for direct contact. The sides and back of the facility are surrounded by a chain link fence and facility personnel are on-site 24 hours per day, 6 days per week.			

01 <input type="checkbox"/> F. CONTAMINATION OF SOIL	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input checked="" type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres)	04 NARRATIVE DESCRIPTION		
Low potential for release to soil. All operations are located inside.			

01 <input type="checkbox"/> G. DRINKING WATER CONTAMINATION	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input checked="" type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
Low potential for release to drinking water. All operations are located inside a building.			

01 <input type="checkbox"/> H. WORKER EXPOSURE/INJURY	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input checked="" type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 9 _____	04 NARRATIVE DESCRIPTION		
Employees are constantly working around acids and caustics. There is a potential that material could splash on employees.			

01 <input type="checkbox"/> I. POPULATION EXPOSURE/INJURY	02 <input type="checkbox"/> OBSERVED (DATE: _____)	<input checked="" type="checkbox"/> POTENTIAL	<input type="checkbox"/> ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____	04 NARRATIVE DESCRIPTION		
Low potential for direct contact. The sides and back of the facility are surrounded by a chain link fence and facility personnel are on-site 24 hours per day, 6 days per week.			



POTENTIAL HAZARDOUS WASTE SITE  
PRELIMINARY ASSESSMENT  
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND  
INCIDENTS

I. IDENTIFICATION	
01 STATE IL	02 SITE NUMBER ILD 082 050 576

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ K. DAMAGE TO FAUNA 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

None identified.

01 ☐ L. CONTAMINATION OF FOOD CHAIN 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ N. DAMAGE TO OFF-SITE PROPERTY 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPS ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING 02 ☐ OBSERVED (DATE: \_\_\_\_\_) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None identified.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None identified.

III. TOTAL POPULATION POTENTIALLY AFFECTED: \_\_\_\_\_

IV. COMMENTS

Low potential for release from the facility's 3 SWMUs.

V. SOURCES OF INFORMATION (Cite specific references; e.g., state files, sample analysis, reports)

Manner, 1991. Conversation between Mike Gorman, RAI and John Gruner, Manner, July 24.

**ATTACHMENT B**

**VISUAL SITE INSPECTION SUMMARY AND PHOTOGRAPHS**



## VISUAL SITE INSPECTION SUMMARY

Manner Plating  
Loves Park, Illinois  
ILD 082 050 576

Date: July 24, 1991

Facility Representatives: John Gruner, Manner Plating

Inspection Team: Michael Gorman, Resource Applications, Inc.  
Gabrielle Norkis, Resource Applications, Inc.

Photographer: Gabrielle Norkis

Weather Conditions: Sunny, Temperature, 80°F.

Summary of Activities: RAI conducted a VSI at the Manner facility at 10:00 A.M. John Gruner, President of Manner explained the facility's operating procedures and waste management practices. This was followed by a walk-through inspection of the facility to observe the waste management units in operation. RAI observed uncontained waste acid flowing over the floor to a drainage trough. RAI concluded the VSI at 12:30 P.M.



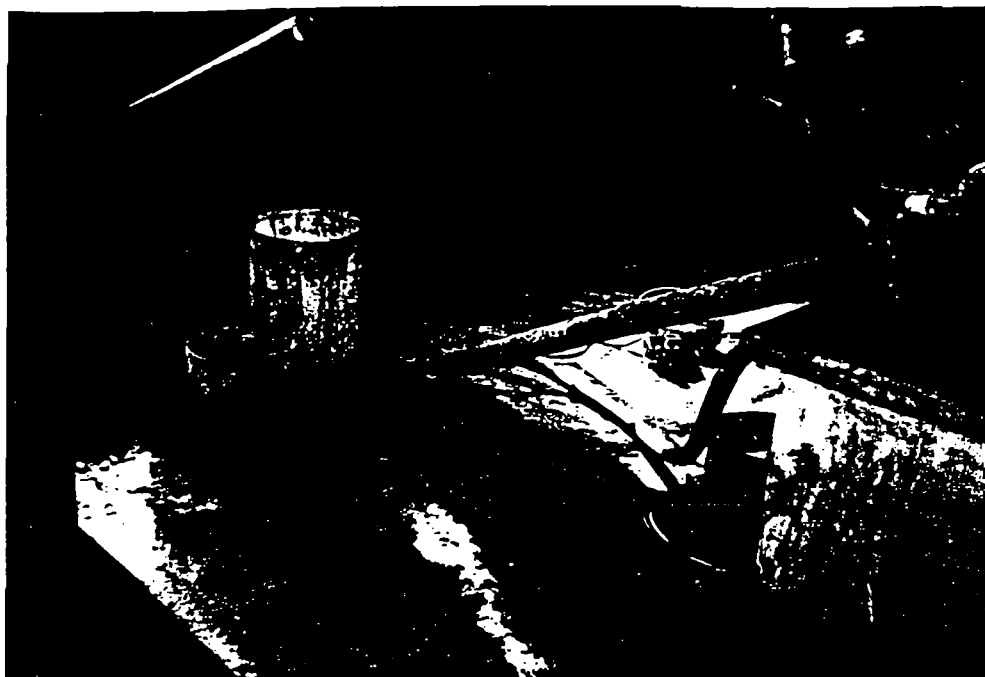
Photograph No. 1

Orientation: East

Description: These tanks are used in the Passivating Line. The Drainage Trough is located behind the tanks.

Location: Passivating Line

Date: 07/24/91



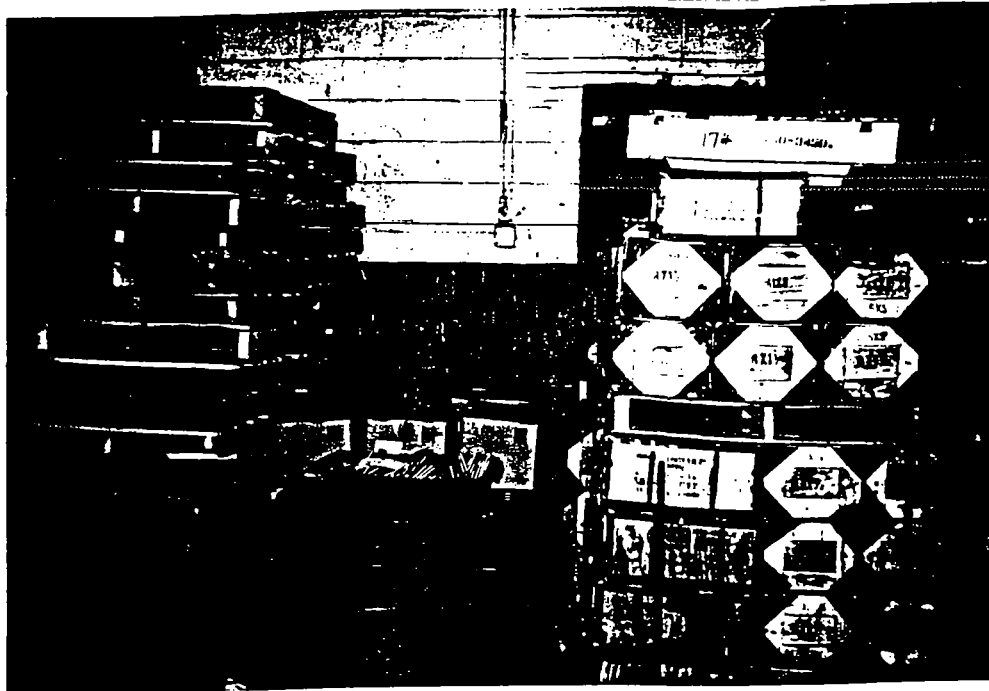
Photograph No. 2

Orientation: Southeast

Description: This is the flooring used to transport waste generated from the Passivating Line to the Drainage Trough located in the back of the photo.

Location: SWMU 3

Date: 07/24/91



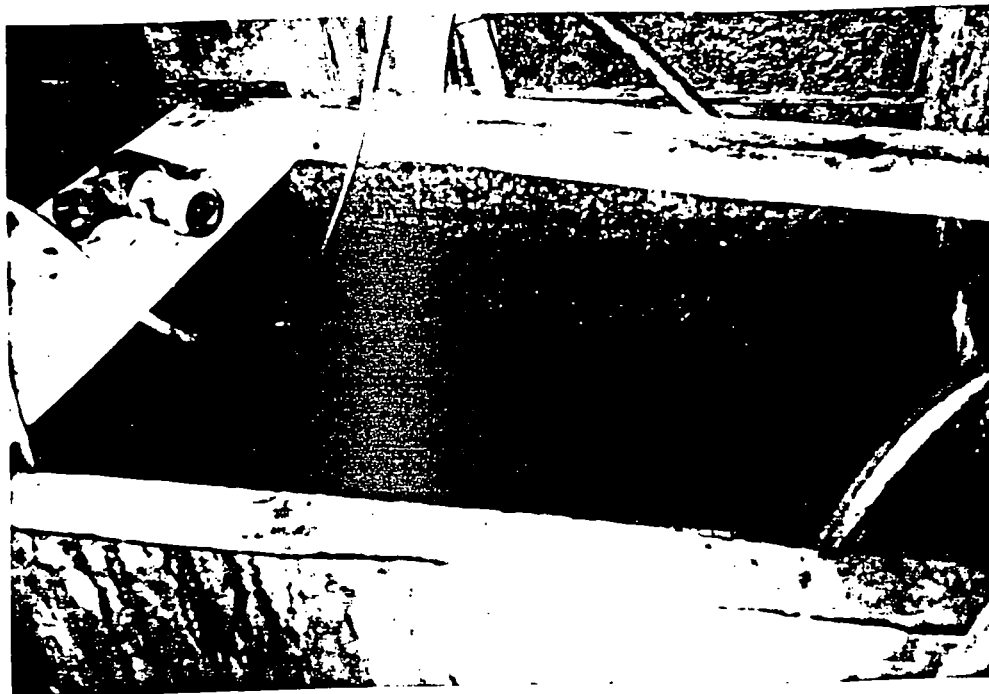
Photograph No. 3

Orientation: East

Description: Closed Drum Storage Area. This area is now used to store finished products.

Location: SWMU 1

Date: 07/24/91



Photograph No. 4

Orientation: Northeast

Description: Pump 1, used to transport waste from the Drainage Trough to the Wastewater Treatment Unit.

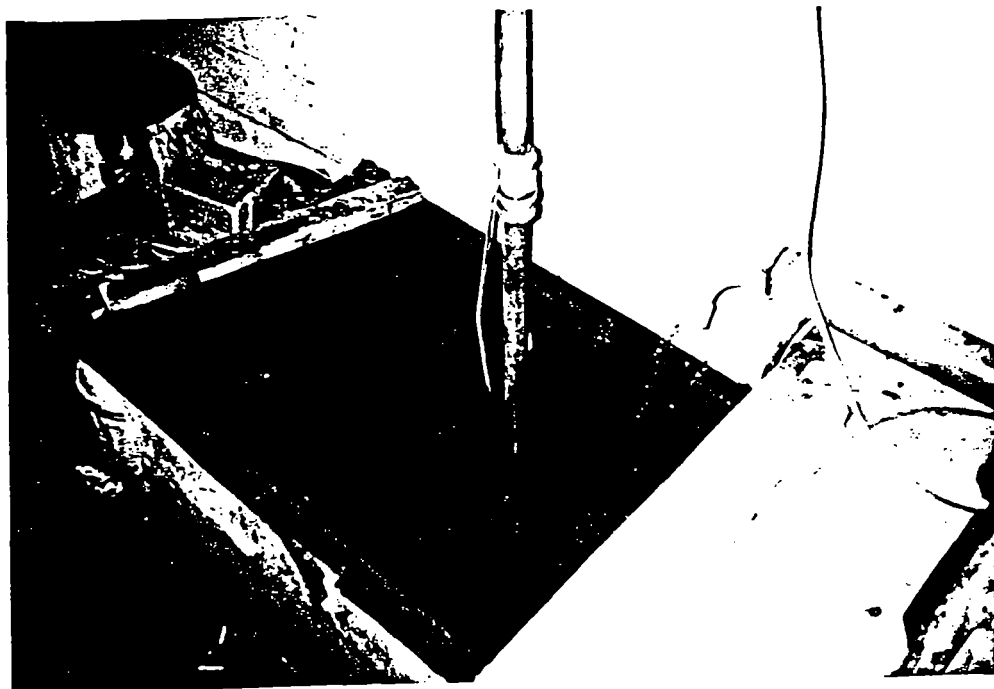
Location: SWMU 3

Date: 07/24/91



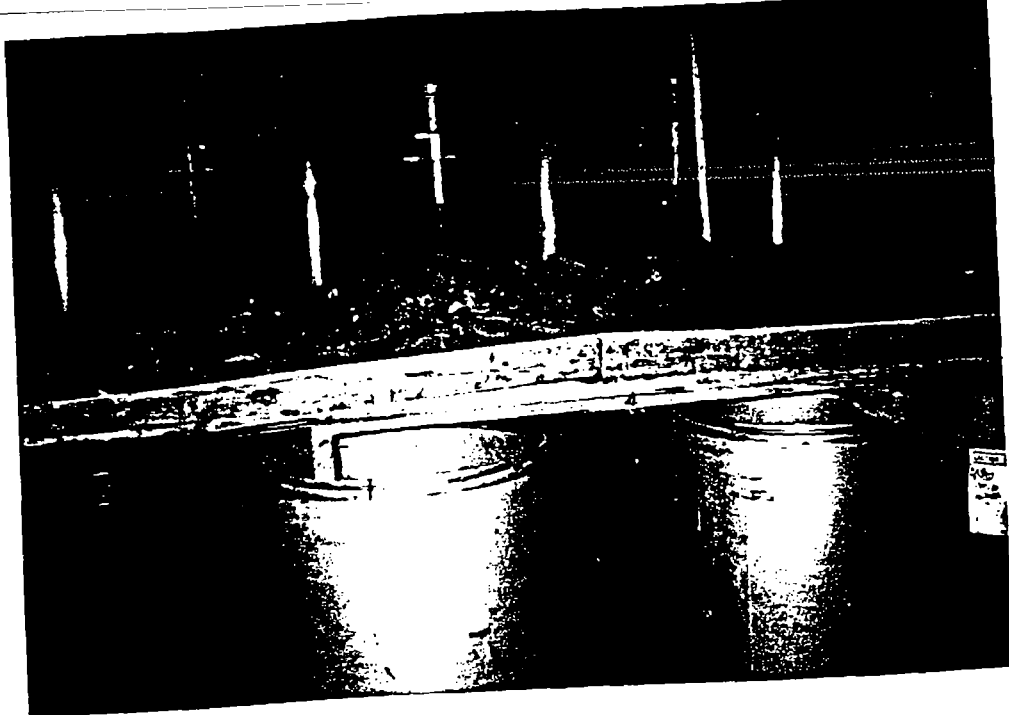
Photograph No. 5  
 Orientation: North  
 Description: Automatic Zinc Plating System.

Location: Plating Line  
 Date: 07/24/91



Photograph No. 6  
 Orientation: West  
 Description: Pump 2, used to transport waste from the Piping System to the Wastewater Treatment Unit.

Location: SWMU 3  
 Date: 07/24/91



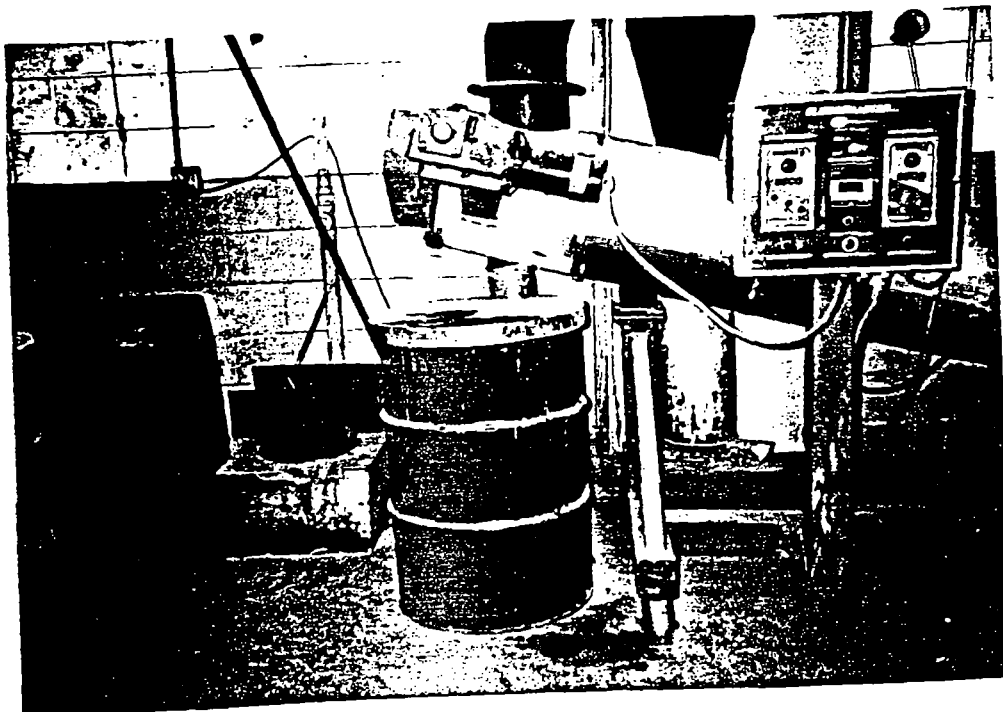
Photograph No. 7

Orientation: West

Description: Plating cake awaiting transfer to the Sludge Drier.

Location: SWMU 2

Date: 07/24/91



Photograph No. 8

Orientation: South

Description: Sludge Drier. The 55-gallon drum temporarily stores the cake before it is transferred to the plastic bags.

Location: SWMU 2

Date: 07/24/91



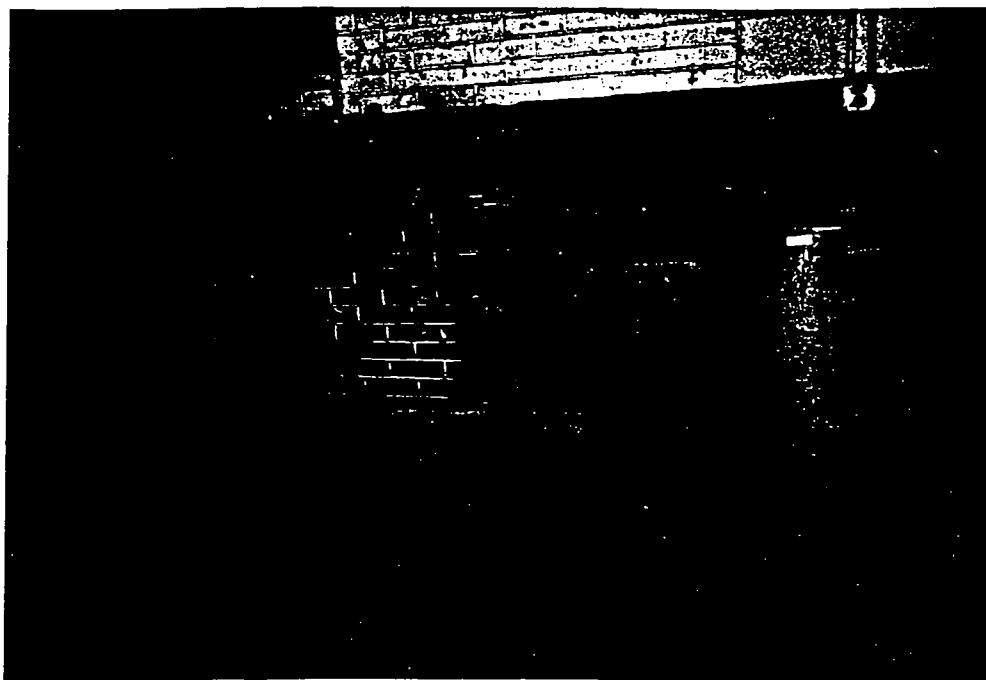
Photograph No. 9

Orientation: North

Location: SWMU 2

Date: 07/24/91

Description: Waste generated from the caustic cleaning tanks. This waste has been accumulating since January 1991.



Photograph No. 10

Orientation: East

Location: SWMU 2

Date: 07/24/91

Description: Current Hazardous Waste Storage Area. No wastes were stored here during the VSI.

**ATTACHMENT C**

**VISUAL SITE INSPECTION FIELD NOTES**

7/24/91

USI Co. Mauer Plating  
Loves Park, IL

10:00 AM

RAT = Mike Gorman

Gaddy Norris

Mauer = John Gorman, Pres.

Mauer is a zinc plating and  
passivating facility that  
produces fasteners.

Mauer is a small operation  
passivating zinc &  
Auto zinc plating shop

started operations in

1974 employs 9 people  
24 hrs/day 6 days/week  
chain link fence surrounds  
the back & sides of the  
facility

No NDE's or Air  
Permits

Have Permit from  
Sanitary District  
expires in 1993

Get HO from Loves Park  
Sanitary District, need to  
call city for address

with hood fan

Mauer is with us

Wastes from Passivating

line are dissolved into

a trough located below

it. The waste is sent

to a sewer

line into a CURT, sent

to a sewer

sewer

Wastes are in plastic drums  
from the zinc line go to

another plant and then

to WUTG, plating

Wastes are in plastic drums

from zinc line

N.D.H.



2

Photo log

1. East Passivation Line " located at
2. Southwest "
3. E. Quarry Drain Storage Area
4. SE Pump for Passivation Line
5. N. Photo zone Line
6. W. Pump for zone line
7. W. Filter cake area. 5 tanks
8. S. to chlorine
9. S. Sledge Drier
9. N. Waste filter alkaline tanks
10. E. Waste Storage Area